

Supplementary Table S1 Clinical Characteristics of 27 pair cases

Supplementary Table S2 Clinical Characteristics of KOV-75

Supplementary Table S3 IFN- γ signature genes

Supplementary Table S4 Lymphocyte count in KOV-75

Supplementary Figure S1

IFN- γ signature scores in IFN-treated cells from GSE 3920 datasets. IFN α ; IFN- α , IFN β ; IFN- β , IFN γ ; IFN- γ .

Supplementary Figure S2

A, Representative images of immunohistochemistry for CD4 and CD8.

B, Number of intraepithelial and stromal CD8-positive cells in primary ovarian tumors.

C, Number of stromal CD8-positive cells in 27 pairs of primary ovarian tumors and their peritoneal dissemination.

D, Number of intraepithelial CD8-positive cells in the same cases as in Supplementary Figure S2C. No significance between two groups.

E, Immunohistochemistry for PD-L1 was performed in a serial section as CD8 immunohistochemistry. Representative cases for PD-L1 score 0, 1, 2, 3 are shown.

Supplementary Figure S3

IFN- γ facilitated tumor growth through PD-L1 induction in a mouse subcutaneous model.

A, Protocol scheme for the experiment. 5 days after subcutaneous inoculation with HM1-Mircontrol or HM1-Mirpd11 cells, the mice were locally injected with mouse IFN- γ 1000IU or PBS five times.

B, Representative images of immunohistochemistry for PD-L1 in mouse subcutaneous tumors. The HM1-Mircontrol treated with IFN- γ showed high expression of PD-L1 (upper left). Bars; 50 μ m.

C, Growth of subcutaneous HM1-Mircontrol or HM1-Mirpd11 tumors after local injection of PBS or IFN- γ . The HM1-Mircontrol with IFN- γ treatment (red line) showed

the fastest tumor growth, while growth was completely abrogated in HM1-Mirpd11 tumors (blue line) (n=3).

D, Growth of subcutaneous ID8-Mircontrol or ID8-Mirpd11 tumors after local injection of PBS or IFN- γ . n=5.

Supplementary Figure S4

PD-L1 expression on tumor cells inhibits infiltration of CD8-positive lymphocytes into the tumor.

A, CD8⁺ tumor infiltrating lymphocytes (TILs) is shown in percentage to the all cells in the disseminated tumor of HM1-pdl1 (P) or HM1-Mirpd11 (M). n=6, P<0.05. CD3-positive and CD8-positive cells were gated.

B, CD4⁺ TILs. n=6, N.S.: no significant difference. CD3- and CD8-positive cells were gated.

C, MDSCs is shown in percentage to the all cells in the tumor. CD11b-positive Gr1-positive cells were gated.